



STIC Search Report

EIC 2100

STIC Database Tracking Number: 148518

TO: Cam-Linh T Nguyen
Location: RND 3C21
Art Unit : 2161
Wednesday, March 23, 2005

Case Serial Number: 09/869182

From: David Holloway
Location: EIC 2100
RND 4B19
Phone: 2-3528

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Search Notes

Dear Examiner Nguyen,

Attached please find your search results for above-referenced case.
Please contact me if you have any questions or would like a re-focused search.

David

Set	Items	Description
S1	7	AU=STERNEMANN K?
S2	7	IDPAT (sorted in duplicate/non-duplicate order)
S3	4	IDPAT (primary/non-duplicate records only)
File 347:JAPIO Nov 1976-2004/Nov(Updated 050309)		
(c) 2005 JPO & JAPIO		
File 348:EUROPEAN PATENTS 1978-2005/Mar W01		
(c) 2005 European Patent Office		
File 349:PCT FULLTEXT 1979-2005/UB=20050317,UT=20050310		
(c) 2005 WIPO/Univentio		
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200519		
(c) 2005 Thomson Derwent		

3/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.

013303635 **Image available**
WPI Acc No: 2000-475570/200041
XRPX Acc No: N00-354830

Data object processing method e.g. for accessing information via Internet, uses multi-dimensional information space with discrete storage locations containing information objects characterizing position of data object in data space

Patent Assignee: STERNEMANN K (STER-I)
Inventor: STERNEMANN K
Number of Countries: 020 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200038084	A2	20000629	WO 99EP10377	A	19991223	200041 B
DE 19962787	A1	20001019	DE 1062787	A	19991223	200053
EP 1224579	A2	20020724	EP 99967981	A	19991223	200256
			WO 99EP10377	A	19991223	

Priority Applications (No Type Date): DE 1060008 A 19981223

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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WO 200038084	A2	G	68	G06F-017/30
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Designated States (National): JP US

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

DE 19962787	A1	G06F-017/30
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EP 1224579	A2	G	G06F-017/30	Based on patent WO 200038084
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Designated States (Regional): DE FR GB IT

Abstract (Basic): WO 200038084 A2

NOVELTY - The data object processing method uses a multi-dimensional information space (5) with at least 2 virtual dimensions, at least one of which contains a number of discrete storage locations for information objects containing at least one index specification characterizing the position of the data object in a data space and at least characteristic specification for a virtual dimension of the information space. A computer-controlled processor is used for identifying the information object in the information space, with processing of the data object prompted by at least one instruction set (8).

DETAILED DESCRIPTION - Also included are INDEPENDENT CLAIMS for the following:

(a) a data carrier for a data object processing method;

(b) a processor for data object processing

USE - The data object processing method can be used for data storage or retrieval, e.g for accessing information via the Internet.

ADVANTAGE - The separation of the data and information spaces allows flexible information representation.

DESCRIPTION OF DRAWING(S) - The figure shows a principle representation of a data object processing device.

Multi-dimensional information space (5)

Instruction set (8)

pp; 68 DwgNo 1/18

Title Terms: DATA; OBJECT; PROCESS; METHOD; ACCESS; INFORMATION; MULTI; DIMENSION; INFORMATION; SPACE; DISCRETE; STORAGE; LOCATE; CONTAIN; INFORMATION; OBJECT; CHARACTERISTIC; POSITION; DATA; OBJECT; DATA; SPACE

Derwent Class: T01

International Patent Class (Main): G06F-017/30

File Segment: EPI

Set	Items	Description
S1	36	AU=(STERNEMANN, K? OR STERNEMANN K?)
S2	3	S1 AND (DATACUBE? OR DATASPACE? OR DATA()SPACE? ? OR 3D OR THREED OR (3 OR THREE OR MULTI OR MULTIPLE)() (D OR DIMENSION?-))
S3	1	RD (unique items)
File	2:INSPEC 1969-2005/Mar W2	(c) 2005 Institution of Electrical Engineers
File	6:NTIS 1964-2005/Mar W2	(c) 2005 NTIS, Intl Cpyrght All Rights Res
File	8:Ei Compendex(R) 1970-2005/Mar W2	(c) 2005 Elsevier Eng. Info. Inc.
File	34:SciSearch(R) Cited Ref Sci 1990-2005/Mar W2	(c) 2005 Inst for Sci Info
File	35:Dissertation Abs Online 1861-2005/Feb	(c) 2005 ProQuest Info&Learning
File	65:Inside Conferences 1993-2005/Mar W3	(c) 2005 BLDSC all rts. reserv.
File	636:Gale Group Newsletter DB(TM) 1987-2005/Mar 23	(c) 2005 The Gale Group
File	148:Gale Group Trade & Industry DB 1976-2005/Mar 22	(c)2005 The Gale Group
File	94:JICST-EPlus 1985-2005/Feb W1	(c)2005 Japan Science and Tech Corp(JST)
File	95:TEME-Technology & Management 1989-2005/Feb W2	(c) 2005 FIZ TECHNIK

3/5/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2005 Institution of Electrical Engineers. All rts. reserv.

6417078 INSPEC Abstract Number: C2000-01-7100-019

Title: Context sensitive provision and visualisation of enterprise information with a hypermedia based system

Author(s): Sternemann, K.-H. ; Zelm, M.

Author Affiliation: Inst. for Machine Tools & Production Sci., Karlsruhe Univ., Germany

Journal: Computers in Industry vol.40, no.2-3 p.173-84

Publisher: Elsevier,

Publication Date: Nov. 1999 Country of Publication: Netherlands

CODEN: CINUD4 ISSN: 0166-3615

SICI: 0166-3615(199911)40:2/3L.173:CSPV;1-1

Material Identity Number: C242-1999-008

U.S. Copyright Clearance Center Code: 0166-3615/99/\$20.00

Document Number: S0166-3615(99)00022-6

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: Today's enterprises need distributed, modular information systems which interact with business processes, support decision making, are adaptable to decentralised organisation structures and comply with industry standards. Intelligent interaction of enterprise process and information supply offers a significant potential to improve the competitive advantage. Business process modelling with a context oriented provision and visualisation of information objects, enables the user to adapt his processes and to manage the relevant information needed. The paper describes the concept of a structured multidimensional space for information objects, the Collaborative Information Space developed in the DARIF/sup 2/ project. The Collaborative Information Space is structured into the dimensions of processes, information aspects and function domains and provides online information about the user relevant enterprise aspects needed for and produced by the enterprise processes. The content of the three dimensions follows the CIMOSA modelling methodology thereby enabling the Collaborative Information Space to be used in the CIMOSA enterprise engineering environment for identifying the information needed during the creation, and redesign of enterprise models. The Collaborative Information Space employs Internet/intranet technologies which allow to integrate information received from different server types and applications of heterogeneous systems. A multidimensional Web browser, the Structure Browser, has been introduced to query, navigate in and operate the information system. (8 Refs)

Subfile: C

Descriptors: business data processing; computer integrated manufacturing; data visualisation; hypermedia; Internet; intranets

Identifiers: enterprise information visualisation; hypermedia; information systems; business processes; decision making; industry standards; business process modelling; Collaborative Information Space; DARIF project; online information; CIMOSA; modelling methodology; Internet; intranet; Web browser; Structure Browser

Class Codes: C7100 (Business and administration); C6130M (Multimedia); C7210N (Information networks)

Copyright 1999, IEE

Set	Items	Description
S1	60738	3D OR MULTIDIMENSION? OR BIDIMENSION? OR (MULTI OR MULTIPLE OR PLURAL OR MANY OR SEVERAL OR TOW OR 2 THREE OR 3) (N) (D OR DIMENSION?) OR DATACUBE?
S2	3898	S1(5N) (DATASPACE? OR SPACE? OR RETRIEV? OR STORAGE? OR MEM-OR? OR MAP OR MAPPING?)
S3	144147	VECTOR? ? OR POINTER? OR METADATA? OR META()DATA
S4	5333483	CONTROL? OR INSTRUCTION? OR ADDRESS? OR PROPERT? OR LOCATI-ON?
S5	4165894	OBJECT? OR FILE? OR IMAGE? OR DATA OR INFORMATION? OR OO
S6	2963	S2 AND S5
S7	96	S3 AND S4 AND S6
S8	19	S3(2N)S4 AND S2
S9	56	(S7 OR S8) AND IC=G06F?
S10	36	S9 NOT AD=19981223:20011223
S11	33	S10 NOT AD=20011223:20031223
S12	33	S11 NOT AD=20031223:20050401
S13	33	IDPAT (sorted in duplicate/non-duplicate order)
S14	33	IDPAT (primary/non-duplicate records only)

File 347:JAPIO Nov 1976-2004/Nov(Updated 050309)
(c) 2005 JPO & JAPIO

File 350:Derwent WPIX 1963-2005/UD,UM &UP=200519
(c) 2005 Thomson Derwent

14/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012383862 **Image available**
WPI Acc No: 1999-189969/199916
XRPX Acc No: N99-138999

Patterned sparse array indexing method for data cache address generator in microprocessor

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)

Inventor: DOOLING D R; MORAN D E; MULLIN L M R

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5878424	A	19990302	US 96590648	A	19960124	199916 B

Priority Applications (No Type Date): US 96590648 A 19960124

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5878424	A	26	G06F-017/30	

Abstract (Basic): US 5878424 A

NOVELTY - The processing device reproduces the patterned sparse array based on the input index **vector** , shape indicator and symmetric indicator and the upper and lower bandwidth and the shape of the array stored in a storage device.

DETAILED DESCRIPTION - The non-zero elements of the array, upper and lower bandwidth and the shape of the array i.e. number of elements in each dimension of the array are stored in a storage device. An index **vector** comprising a skip value for skipping **data** elements and reproducing specific element in the array and a shape indicator are input to the processing device. Based on the shape indicator, the **storage** of **multi - dimensional** array is determined. An INDEPENDENT CLAIM is included for patterned sparse array indexing apparatus.

USE - For **data** cache **address** generator in microprocessor workstation used in various scientific and engineering fields.

ADVANTAGE - Requires less memory storage space by storing only non-zero elements in the array. Since the sparse array **address** calculation is predictable, the exact **address** may be prefetched to improve the **data** cache hit ratio and **addressing** efficiency. The array **address** is optimized regardless of the compiler used. CPU is not required for performing **address** translation.

DESCRIPTION OF DRAWING(S) - The figure shows the subarray to illustrate the access state of hardware.

pp; 26 DwgNo 16/16

Title Terms: PATTERN; ARRAY; INDEX; METHOD; **DATA** ; **CACHE**; **ADDRESS** ;
GENERATOR; MICROPROCESSOR

Derwent Class: T01

International Patent Class (Main): **G06F-017/30**

File Segment: EPI

14/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011945094 **Image available**
WPI Acc No: 1998-362004/199831
XRPX Acc No: N98-282656

Multi-dimensional representation generation system - includes meta - data manager extracting source data with database connectivity engine

Patent Assignee: ANWAR M S (ANWA-I)

Inventor: ANWAR M S

Number of Countries: 081 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5767854	A	19980616	US 96721899	A	19960927	199831 B
WO 9944164	A1	19990902	WO 98US3736	A	19980224	199943 N
AU 9865371	A	19990915	AU 9865371	A	19980224	200004 N
			WO 98US3736	A	19980224	

Priority Applications (No Type Date): US 96721899 A 19960927; WO 98US3736 A 19980224; AU 9865371 A 19980224

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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US 5767854	A		53	G06F-003/14	
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AU 9865371	A			G06F-017/60	Based on patent WO 9944164
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WO 9944164	A1 E			G06F-017/60	
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Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW

Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

Abstract (Basic): US 5767854 A

The generation system includes a **meta - data** manager extracting **data** from a **data** source. An IO broker coordinates IO between the system and the **data** sources. Import and export routines import and export **information** to and from **data** sources and the system and within the system. A database connectivity engine for communicating with a **data** source manager for processing of **data** source queries. A number of dynamically generated SQL routines to optimize runtime performance. A query estimate manager for estimating the time to retrieve desired **information** from a **data** source. Size and time keeping routines for computer resource allocation and timing. A **data** carousel or **object controller** for generating and manipulating **data objects**. A selection exception agent. A spreadsheet **controller** for assigning spreadsheet functionality of one or more side of a n-gon. A schema synchronization manager for consolidating **data** schema and logical schema from different **data** sources. A threads manager. A macro and/or scripting language manager for executing multi-step user defined operations. an API set.

An analytic engine for performing routine analyses on an n-gonal representation of **data**. Manipulation routines for manipulating the **data objects** within the n-gonal representation. Filtering and/or exception routines for masking undesired **information** or highlighting desired **information**. A communication manager for communicating with other programs and systems. The user interface includes a window generator, a n-gon generator, a n-gonal solid generator, n-gon manipulation routines, user dialog boxes, user scroll bars, a tool bar and a relationship generator.

ADVANTAGE - Provides fast efficient and understandable retrieval, display, manipulation, analysis and **storage of multi - dimensional data**.

Dwg.1/39

Title Terms: MULTI; DIMENSION; REPRESENT; GENERATE; SYSTEM; META; **DATA**; MANAGE; EXTRACT; SOURCE; **DATA**; DATABASE; CONNECT; ENGINE

Derwent Class: T01

International Patent Class (Main): G06F-003/14; G06F-017/60

14/5/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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010654580 **Image available**
WPI Acc No: 1996-151534/199615
XRPX Acc No: N96-127289

Validity range evaluation system for artificial neural network - has linearly superimposed Gauss functions used to approximate training data distribution within training space with verification of superimposition value

Patent Assignee: SIEMENS AG (SIEI)
Inventor: HOEHFELD M
Number of Countries: 018 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9606400	A1	19960229	WO 95DE1090	A	19950817	199615 B
EP 777881	A1	19970611	EP 95928440	A	19950817	199728
			WO 95DE1090	A	19950817	
EP 777881	B1	19980527	EP 95928440	A	19950817	199825
			WO 95DE1090	A	19950817	
JP 10504667	W	19980506	WO 95DE1090	A	19950817	199828
			JP 96507696	A	19950817	
DE 59502359	G	19980702	DE 502359	A	19950817	199832
			EP 95928440	A	19950817	
			WO 95DE1090	A	19950817	

Priority Applications (No Type Date): DE 4430024 A 19940824

Cited Patents: 4.Jnl.Ref; WO 9412948

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9606400	A1	G	34	G06F-015/80	
				Designated States (National): JP US	
				Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE	
EP 777881	A1	G		G06F-015/80	Based on patent WO 9606400
				Designated States (Regional): DE FR GB	
EP 777881	B1	G		G06F-015/80	Based on patent WO 9606400
				Designated States (Regional): DE FR GB	
JP 10504667	W		28	G06F-015/18	Based on patent WO 9606400
DE 59502359	G			G06F-015/80	Based on patent EP 777881
					Based on patent WO 9606400

Abstract (Basic): WO 9606400 A

The validity range evaluation system has the network parameters of the neural network represented by a set of training data within a multi - dimensional training space , with the distribution of the training data approximated by superimposing a selected number of multi-dimensional Gauss functions, for determining mean value vectors and covariance matrices.

The training data set is divided into partial data sets, associated with respective mean value vectors , with scaling of the covariances so that the linear superimposition reaches a given value for a selected section of the training data , the corresponding parts of the training data space verified as being within the validity range.

USE - For ind. process control .

Dwg.1/2

Title Terms: VALID; RANGE; EVALUATE; SYSTEM; ARTIFICIAL; NEURAL; NETWORK;
LINEAR; SUPERIMPOSED; GAUSS; FUNCTION; APPROXIMATE; TRAINING; DATA ;
DISTRIBUTE; TRAINING; SPACE; VERIFICATION; SUPERIMPOSED; VALUE

Derwent Class: T01

International Patent Class (Main): G06F-015/18 ; G06F-015/80

File Segment: EPI

14/5/12 (Item 12 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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008793579 **Image available**
WPI Acc No: 1991-297593/199141
Related WPI Acc No: 1995-052664
XRPX Acc No: N91-228019

Classifying system e.g. for accounting or auditing - use of microcomputer enables construction of multi - dimensional matrix to hold and retrieve data

Patent Assignee: SAMPSON W C (SAMP-I); OLAN M J (OLAN-I)

Inventor: OLAN M J; SAMPSON W C

Number of Countries: 009 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 450825	A	19911009	EP 91302560	A	19910325	199141 B
CA 2035953	A	19911006				199201
US 5212639	A	19930518	US 90505061	A	19900405	199321
EP 450825	A3	19930915	EP 91302560	A	19910325	199509
CA 2035953	C	19950425	CA 2035953	A	19910207	199524
EP 450825	B1	19971008	EP 91302560	A	19910325	199745
DE 69127847	E	19971113	DE 627847	A	19910325	199751
			EP 91302560	A	19910325	

Priority Applications (No Type Date): US 90505061 A 19900405

Cited Patents: NoSR.Pub; No-Citns.

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 450825	A				
Designated States (Regional): CH DE FR GB IT LI NL					
US 5212639	A		13	G06F-015/34	
EP 450825	B1 E		20	G06F-017/30	
Designated States (Regional): CH DE FR GB IT LI NL					
DE 69127847	E			G06F-017/30	Based on patent EP 450825
CA 2035953	C			G06F-015/20	

Abstract (Basic): EP 450825 A

The **data** entries are separate records of one or more items and two item indicators are generated for each. A mapping function is applied to each **data** entry to assign the item indicators. The latter are then sorted into an ascending numerical sequence and an n-dimensional sparse matrix is selected, where n is the number of items in each entry.

After all **data** entries have been processed, a search routine is used to review selected records.

USE/ADVANTAGE - Processor-based method of summarising **data** entries for efficient inspection and reporting. (11pp Dwg.No.4/8)

Title Terms: CLASSIFY; SYSTEM; ACCOUNT; AUDIT; MICROCOMPUTER; ENABLE; CONSTRUCTION; MULTI; DIMENSION; MATRIX; HOLD; RETRIEVAL; **DATA**

Derwent Class: T01

International Patent Class (Main): G06F-015/20 ; G06F-015/34 ; G06F-017/30

International Patent Class (Additional): G06F-015/40

File Segment: EPI

14/5/22 (Item 22 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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004803555

WPI Acc No: 1986-306896/198647

XRPX Acc No: N86-229286

Two-dimensional virtual image memory - provides multi-windowing with memory addressed symmetrically by video generator and interface via look-up table

Patent Assignee: ODONELL C (ODON-I)

Inventor: O'DONNELL C

Number of Countries: 004 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 202166	A	19861120	EP 86401008	A	19860512	198647 B
FR 2582132	A	19861121				198701
US 4815010	A	19890321	US 86862780	A	19860513	198914
EP 202166	B	19901031				199044
DE 3675253	G	19901206				199050

Priority Applications (No Type Date): FR 857412 A 19850515

Cited Patents: FR 2535497

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 202166	A	F	13		
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Designated States (Regional): DE GB

EP 202166	B				
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Designated States (Regional): DE GB

Abstract (Basic): EP 202166 B

The memory (4) is organised into a number of elementary rectangular blocks. A lookup table (6) in random-access memory contains an equal number of **pointers**, each signifying the initial **address** of a block.

A video generator (10) delivers a signal corresp. to the content of an equal or smaller number of blocks for screen display of an **image** composed of that number in matrix array. An interface (12) affords access to the **image** memory and table in read or write mode.

USE/ADVANTAGE - With raster or bit-map display screen. Memory management is simplified by **addressing** symmetry. Modifiable lookup table allows multiple windows to be created and changed without physical movement of stored **image**. (13pp Dwg.No.2/6)

Title Terms: TWO; DIMENSION; VIRTUAL; **IMAGE**; MEMORY; MULTI; MEMORY; **ADDRESS**; SYMMETRICAL; VIDEO; GENERATOR; INTERFACE; UP; TABLE

Derwent Class: P85; T04

International Patent Class (Additional): G06F-003/14 ; G09G-001/00;

G11C-007/00

File Segment: EPI; EngPI

14/5/24 (Item 24 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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004769228

WPI Acc No: 1986-272569/198642

XRPX Acc No: N86-203393

Address **calculation circuit for multidimensional parallel memory - computes spacing vector coordinates as difference between coordinates of points at ends of vectors and selected point in given access window**

Patent Assignee: AKAD WISSENSCHAFTEN DDR (DEAK)

Inventor: GOSSEL M; REBEL B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DD 236820	A	19860618	DD 270283	A	19841205	198642 B

Priority Applications (No Type Date): DD 270283 A 19841205

Abstract (Basic): DD 236820 A

The circuit contains elements which compute spacing **vectors** starting from a selected grid point. The grid points in the window are at the ends of the **vectors** . The difference between the coordinate values of the grid points in the window and the selected point represents the coordinates of the spacing **vectors** .

The circuit also has elements to determine the **address** of the spacing **vectors** and the **address** of the selected grid point for isotropic **address** functions and for associative linking of these **addresses** .

USE/ADVANTAGE - Digital **image** processing. A large number of parallel access windows is provided. (-pp Dwg.No.1/1)

Title Terms: **ADDRESS** ; CALCULATE; CIRCUIT; MULTIDIMENSIONAL; PARALLEL; MEMORY; COMPUTATION; SPACE; **VECTOR** ; COORDINATE; DIFFER; COORDINATE; POINT; END; **VECTOR** ; SELECT; POINT; ACCESS; WINDOW

Derwent Class: T01

International Patent Class (Additional): **G06F-012/06** ; G11C-008/00

File Segment: EPI

14/5/25 (Item 25 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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004068273

WPI Acc No: 1984-213814/198435

XRPX Acc No: N84-160104

Multidimensional **parallel** memory for digital data processing -
accessed by addresses derived from memory window coordinate changes

Patent Assignee: AKAD WISSENSCHAFTEN DDR (DEAK)

Inventor: GOESSEL M; REBEL B

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DD 208499	A	19840502	DD 244274	A	19821026	198435 B
US 4570236	A	19860211	US 83545739	A	19831026	198609

Priority Applications (No Type Date): DD 244274 A 19821026

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
DD 208499	A	34		

Abstract (Basic): DD 208499 A

Residual **addresses** for each of N memory elements are derived by modulo-N arithmetic from **address** reference points by **address** computation circuits associated with each memory element. The **address** computation circuits use short word lengths and provide access via conflict-free single, two and **multidimensional** windows to the **storage** functions.

The **address** computation circuits require only the changes of the coordinates relative to the preceding windows and the characteristics of the windows. The computation of memory **addresses** is performed recursively.

USE/ADVANTAGES - Improved memory access is achieved for digital **image data** to be processed by high power processors. **Address** derivation is simplified to linear form.

0/6

Title Terms: MULTIDIMENSIONAL; PARALLEL; MEMORY; DIGITAL; **DATA** ; PROCESS;
ACCESS; **ADDRESS** ; DERIVATIVE; MEMORY; WINDOW; COORDINATE; CHANGE

Derwent Class: T01; U14

International Patent Class (Additional): G06F-009/28 ; G06F-013/06 ;
G06F-015/34 ; G11C-007/00

File Segment: EP

Set	Items	Description
S1	167861	3D OR MULTIDIMENSION? OR BIDIMENSION? OR (MULTI OR MULTIPLE OR PLURAL OR MANY OR SEVERAL OR TOW OR 2 THREE OR 3) (N) (D OR DIMENSION?) OR DATACUBE?
S2	6694	S1(5N) (DATASPACE? OR SPACE? OR RETRIEV? OR STORAGE? OR MEM-OR? OR MAP OR MAPPING?)
S3	163855	VECTOR? ? OR POINTER? OR METADATA? OR META() DATA
S4	1389668	CONTROL? OR INSTRUCTION? OR ADDRESS? OR PROPERT? OR LOCATI-ON?
S5	1632840	OBJECT? OR FILE? OR OOPL OR OODB OR DATA OR INFORMATION? OR OO
S6	483	S2(10N)S3
S7	78	S3(10N)S4(10N)S6
S8	62	S3(2N)S4(10N)S2
S9	14	(S7 OR S8) AND IC=(G06F-017? OR G06F-007?)
File 348:EUROPEAN PATENTS 1978-2005/Mar W01		
(c) 2005 European Patent Office		
File 349:PCT FULLTEXT 1979-2005/UB=20050317,UT=20050310		
(c) 2005 WIPO/Univentio		

Set	Items	Description
S1	586653	3D OR MULTIDIMENSION? OR BIDIMENSION? OR (MULTI OR MULTIPLE OR PLURAL OR MANY OR SEVERAL OR TOW OR 2 THREE OR 3) (N) (D OR DIMENSION?) OR DATACUBE?
S2	20913	S1(3N) (DATASPACE? OR SPACE? OR RETRIEV? OR STORAGE? OR MEM-OR? OR MAP OR MAPPING?)
S3	300717	VECTOR? ? OR POINTER? OR METADATA? OR META() DATA
S4	15797983	CONTROL? OR INSTRUCTION? OR ADDRESS? OR PROPERT? OR LOCATI-ON?
S5	25001769	OBJECT? OR FILE? OR OOPL OR OODB OR DATA OR INFORMATION? OR OO
S6	3990	S2 (10N) S5
S7	8	S3 (10N) S4 (10N) S6
S8	21	S3(2N)S4 (10N) S2
S9	29	S3(S)S4(S)S6
S10	47	S7 OR S8 OR S9
S11	32	RD (unique items)
S12	20	S11 NOT PY>1998
File 275:	Gale Group Computer DB(TM)	1983-2005/Mar 23 (c) 2005 The Gale Group
File 47:	Gale Group Magazine DB(TM)	1959-2005/Mar 23 (c) 2005 The Gale group
File 75:	TGG Management Contents(R)	86-2005/Mar W1 (c) 2005 The Gale Group
File 636:	Gale Group Newsletter DB(TM)	1987-2005/Mar 23 (c) 2005 The Gale Group
File 16:	Gale Group PROMT(R)	1990-2005/Mar 23 (c) 2005 The Gale Group
File 624:	McGraw-Hill Publications	1985-2005/Mar 22 (c) 2005 McGraw-Hill Co. Inc
File 484:	Periodical Abs Plustext	1986-2005/Mar W2 (c) 2005 ProQuest
File 813:	PR Newswire	1987-1999/Apr 30 (c) 1999 PR Newswire Association Inc
File 141:	Readers Guide	1983-2005/Dec (c) 2005 The HW Wilson Co
File 370:	Science	1996-1999/Jul W3 (c) 1999 AAAS
File 696:	DIALOG Telecom. Newsletters	1995-2005/Mar 22 (c) 2005 The Dialog Corp.
File 553:	Wilson Bus. Abs. FullText	1982-2004/Dec (c) 2005 The HW Wilson Co
File 621:	Gale Group New Prod. Annou. (R)	1985-2005/Mar 23 (c) 2005 The Gale Group
File 674:	Computer News Fulltext	1989-2005/Mar W3 (c) 2005 IDG Communications
File 88:	Gale Group Business A.R.T.S.	1976-2005/Mar 22 (c) 2005 The Gale Group
File 369:	New Scientist	1994-2005/Mar W1 (c) 2005 Reed Business Information Ltd.
File 160:	Gale Group PROMT(R)	1972-1989 (c) 1999 The Gale Group
File 635:	Business Dateline(R)	1985-2005/Mar 23 (c) 2005 ProQuest Info&Learning
File 15:	ABI/Inform(R)	1971-2005/Mar 23 (c) 2005 ProQuest Info&Learning
File 9:	Business & Industry(R)	Jul/1994-2005/Mar 22 (c) 2005 The Gale Group
File 13:	BAMP	2005/Mar W2 (c) 2005 The Gale Group
File 810:	Business Wire	1986-1999/Feb 28 (c) 1999 Business Wire
File 647:	CMP Computer Fulltext	1988-2005/Feb W4 (c) 2005 CMP Media, LLC
File 98:	General Sci Abs/Full-Text	1984-2004/Dec (c) 2005 The HW Wilson Co.
File 148:	Gale Group Trade & Industry DB	1976-2005/Mar 22 (c) 2005 The Gale Group

File 634:San Jose Mercury Jun 1985-2005/Mar 22
(c) 2005 San Jose Mercury News

12/3,K/1 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01870774 SUPPLIER NUMBER: 17600094 (USE FORMAT 7 OR 9 FOR FULL TEXT)
**OLAP spells success for users and developers. (online analytical
processing) (includes related articles on OLAP vs. multidimensional
databases, on the OLAP Report, on the 12 rules of OLAP, and on BrioQuery
Designer 3.1) (Cover Story)**

Youngworth, Paul

Data Based Advisor, v13, n11, p38(12)

Dec, 1995

DOCUMENT TYPE: Cover Story ISSN: 0740-5200 LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 6718 LINE COUNT: 00545

...ABSTRACT: measures: dimensions are the ways users want to see data (by product, by customer, by **location**, etc.); and measures are numeric variables (units, dollars, etc.) OLAP **data** is stored in one of three ways: **multidimensional** databases, other **multidimensional storage**, or **metadata pointers** to a relational database. Vendors supply their own front ends to OLAP databases; they range...

12/3,K/15 (Item 1 from file: 635)
DIALOG(R)File 635:Business Dateline(R)
(c) 2005 ProQuest Info&Learning. All rts. reserv.

0649182 96-05855

Corporate profile for MicroStrategy

Houde, Lisa

Business Wire (San Francisco, CA, US) sl pl

PUBL DATE: 951110

WORD COUNT: 702

DATELINE: Vienna, VA, US, South Atlantic

TEXT:

...Information Access Company and many others.

Published date: Nov. 10, 1995

Company name: MicroStrategy Inc.

Address : 8000 Towers Crescent Dr.
Vienna, Va. 22182

Telephone No.: 703/848-8600

Fax: 703/848...

...decision support object framework introducing intelligent agents and exception reporting alerts, develop a logical transparent **map** between **multidimensional data** views and relational tables, and deliver an off-the-shelf three-tier decision support environment...

...3.0(TM): DSS Architect is a design tool for defining a multidimensional model for **data** stored relationally in a **data** warehouse. DSS Architect creates a **mapping** between end-user **multidimensional objects** and the physical schema of the **data** warehouse by defining and maintaining **metadata**. This **metadata** allows organizations to dynamically link decision support applications to the warehouse. Using DSS Architect's...

Set	Items	Description
S1	804975	3D OR MULTIDIMENSION? OR BIDIMENSION? OR (MULTI OR MULTIPLE OR PLURAL OR MANY OR SEVERAL OR TOW OR 2 THREE OR 3) (N) (D OR DIMENSION?) OR DATACUBE?
S2	36169	S1(5N) (DATASPACE? OR SPACE? OR RETRIEV? OR STORAGE? OR MEM-OR? OR MAP OR MAPPING?)
S3	714950	VECTOR? ? OR POINTER? OR METADATA? OR META() DATA
S4	12988952	CONTROL? OR INSTRUCTION? OR ADDRESS? OR PROPERT? OR LOCATI-ON?
S5	10776149	OBJECT? OR FILE? OR OOPL OR OODB OR DATA OR INFORMATION? OR OO
S6	18255	S2 AND S5
S7	499	S3 AND S4 AND S6
S8	67	S3(2N)S4 AND S2
S9	499	S2 AND S3 AND S4 AND S6
S10	533	S8 OR S9
S11	383	RD (unique items)
S12	209	S11 NOT PY>1998
S13	129	S9 AND S3(3N) (S4 OR S5)
S14	163	S8 OR S13
S15	110	RD (unique items)
S16	53	S15 NOT PY>1998
S17	30678	S1(3N) (DATASPACE? OR SPACE? OR RETRIEV? OR STORAGE? OR MEM-OR? OR MAP OR MAPPING)
S18	47	S16 AND S17
File	8: Ei Compendex(R)	1970-2005/Mar W2 (c) 2005 Elsevier Eng. Info. Inc.
File	35: Dissertation Abs Online	1861-2005/Feb (c) 2005 ProQuest Info&Learning
File	65: Inside Conferences	1993-2005/Mar W3 (c) 2005 BLDSC all rts. reserv.
File	2: INSPEC	1969-2005/Mar W2 (c) 2005 Institution of Electrical Engineers
File	94: JICST-EPlus	1985-2005/Feb W1 (c) 2005 Japan Science and Tech Corp (JST)
File	111: TGG Natl. Newspaper Index (SM)	1979-2005/Mar 22 (c) 2005 The Gale Group
File	6: NTIS	1964-2005/Mar W2 (c) 2005 NTIS, Intl Cpyrght All Rights Res
File	144: Pascal	1973-2005/Mar W2 (c) 2005 INIST/CNRS
File	34: SciSearch (R)	Cited Ref Sci 1990-2005/Mar W2 (c) 2005 Inst for Sci Info
File	99: Wilson Appl. Sci & Tech Abs	1983-2005/Feb (c) 2005 The HW Wilson Co.
File	95: TEME-Technology & Management	1989-2005/Feb W2 (c) 2005 FIZ TECHNIK

18/5/2 (Item 2 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)
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04832727 E.I. No: EIP97093843264

Title: Minimization of memory access overhead for multidimensional DSP applications via multilevel partitioning and scheduling

Author: Wang, Jenny Qingyan; Sha, Edwin Hsing-Mean; Passos, Nelson Luiz
Corporate Source: Univ of Notre Dame, Notre Dame, IN, USA

Source: IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing v 44 n 9 Sep 1997. p 741-753

Publication Year: 1997

CODEN: ICSPE5 ISSN: 1057-7130

Language: English

Document Type: JA; (Journal Article) Treatment: T; (Theoretical)

Journal Announcement: 9711W3

Abstract: Massive uniform nested loops are broadly used in multidimensional digital signal processing (DSP) applications. Due to the large amount of **data** handled by such applications, the optimization of **data** accesses by fully utilizing the local memory and minimizing communication overhead is important in order to improve the overall system performance. Most of the traditional partition strategies do not consider the effect of **data** access on the computational performance. In this paper, a multilevel partitioning method, based on a static **data** scheduling technique known as carrot-hole **data** scheduling, is proposed to **control** the **data** traffic between different levels of memory. Based on this **data** schedule, optimal partition **vector**, scheduling **vector** and the partition size are chosen in such a way to minimize communication overhead. Nonhomogeneous size partitions are the final result of the partition scheme which produces a significant performance improvement. Experiments show that by using this technique, local memory misses are significantly reduced as compared to results obtained from traditional methods. This method can be used in application specific DSP system design and compiler for DSP processors. (Author abstract) 38 Refs.

Descriptors: *Digital signal processing; **Data** storage equipment; **Data** communication systems; **Data** acquisition; Scheduling; Congestion **control** (communication); **Vectors**

Identifiers: Multilevel partitioning method; Memory access; Nested loops

Classification Codes:

716.1 (Information & Communication Theory); 722.1 (Data Storage, Equipment & Techniques); 723.2 (Data Processing); 921.1 (Algebra)

716 (Radar, Radio & TV Electronic Equipment); 722 (Computer Hardware); 723 (Computer Software); 921 (Applied Mathematics)

71 (ELECTRONICS & COMMUNICATIONS); 72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

18/5/10 (Item 10 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)
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03784817 E.I. No: EIP94011188527

Title: Distributed systems reliability prediction for multidimensional space of quality

Author: Lobanov, E.V.

Source: Problemy Prochnosti i Nadezhnos'ti Mashin n 4 Jul-Aug 1993. p 61-68

Publication Year: 1993

CODEN: 000772

Language: Russian

Document Type: JA; (Journal Article) Treatment: A; (Applications); T; (Theoretical)

Journal Announcement: 9403W1

Abstract: In terms of the theory for scarce outlays of random tensor fields simple formulae are derived for the distributed physical system reliability function. A case of **multidimensional quality space** is examined which is connected with coordinate space of arbitrary dimensionality. Scalar, vector and tensor fields of different physical character are considered as field vector components. Estimations are given for the intensity of random vector Gauss field outlines from the area of permissible states as a multidimensional parallelepiped. When deriving formulae, high reliability of a physical system is taken in consideration in succession. 10 Refs.

Descriptors: *Mechanical engineering; Assembly machines; Machine components; Mechanisms; Tensors; Distributed parameter **control** systems; Reliability; **Vectors** ; State space methods; Forecasting

Identifiers: Coordinate space

Classification Codes:

921.4 (Combinatorial Mathematics, Includes Graph Theory, Set Theory)

608 (Mechanical Engineering, General); 921 (Applied Mathematics)

60 (MECHANICAL ENGINEERING); 92 (ENGINEERING MATHEMATICS)

18/5/11 (Item 11 from file: 8)
DIALOG(R)File 8:EI Compendex(R)
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03692495 E.I. No: EIP93050805208

Title: Multilayer 3D memory based on a vectorial organic recording medium

Author: Hirsh, Jay; Savant, Gajendra; Jannson, Tomasz; Caulfield, H.J.

Corporate Source: Physical Optics Corp., Los Angeles, CA, USA

Conference Title: Organic and Biological Optoelectronics

Conference Location: Los Angeles, CA, USA **Conference Date:** 19930118-19930119

Sponsor: SPIE - Int Soc for Opt Engineering, Bellingham, WA, USA

E.I. Conference No.: 18613

Source: Proceedings of SPIE - The International Society for Optical Engineering v 1853 1993. Publ by Int Soc for Optical Engineering, Bellingham, WA, USA. p 29-38

Publication Year: 1993

CODEN: PSISDG **ISSN:** 0277-786X **ISBN:** 0-8194-1079-9

Language: English

Document Type: CA; (Conference Article) **Treatment:** X; (Experimental)

Journal Announcement: 9310W3

Abstract: The prospect of high density three-dimensional optical memory has encouraged development efforts. Research has focused on storing Bragg angle multiplexed hologram page storage and two-photon bit storage volumes. Physical Optics Corporation (POC) has investigated alternative multilayer 3 - D memories based on a vectorial organic recording medium. POC's approach incorporates polarization vector switching to independently address layers in the third dimension. POC's methodology has been to fully characterize the molecular and bulk properties of the vectorial organic recording medium, optimize material performance for memory applications including cache and integrated waveguide, and investigate suitable three-dimensional optical memory storage architectures. Here we report on a promising architecture which we have recently demonstrated. 7 refs.

Descriptors: *Optical data storage; Optical materials; Recording; Organic compounds; Holography; Light polarization; Molecules

Identifiers: Multilayer 3D memories ; Vectorial recording

Classification Codes:

722.1 (Data Storage, Equipment & Techniques); 741.1 (Light/Optics); 804.1 (Organic Components)

722 (Computer Hardware); 741 (Optics & Optical Devices); 804 (Chemical Products)

72 (COMPUTERS & DATA PROCESSING); 74 (OPTICAL TECHNOLOGY); 80 (CHEMICAL ENGINEERING)

18/5/13 (Item 13 from file: 8)
DIALOG(R) File 8: Ei Compendex(R)
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03377701 E.I. Monthly No: EI9202016174

Title: Visualizing structure in high-dimensional multivariate data .

Author: Young, F. W.; Rheingans, P.

Corporate Source: Univ of North Carolina, Chapel Hill, NC, USA

Source: IBM Journal of Research and Development v 35 n 1-2 Jan-Mar 1991 p 97-107

Publication Year: 1991

CODEN: IBMJAE ISSN: 0018-8646

Language: English

Document Type: JA; (Journal Article) Treatment: T; (Theoretical); A; (Applications)

Journal Announcement: 9202

Abstract: We present and discuss several dynamic statistical graphics tools designed to help the **data** analyst visually discover and formulate hypotheses about the structure of multivariate **data** . All tools are based on the notion of the '**data** space,' a representation of multivariate **data** as a high-dimensional (hD) space which has a dimension for each variable (column of the **data**) and a point for each case (row of the **data**). The **data** space is projected orthogonally onto the 'visual space,' a three-dimensional space which is seen and manipulated by the **data** analyst. The visual space has a point-like **object** for each case and can have a **vector** -like **object** for each variable. The three dimensions of the visual space are orthogonal linear combinations of the variables. We discuss the notion of a 'guided tour' of multivariate **data** space, and present guided-tour tools, including 1) 6D-rotation, a tool for dynamically rotating, in six-dimensional (6D) **space** , from one 3D portion of the **data** space to another while displaying the dynamically changing projection in the visual space; 2) hD-residualization, a tool that determines, at the user's request, the largest invisible 3D **space** - i.e., the largest 3D **space** is orthogonal to the visual space. This space is used with the visual space so that 6D-rotation can occur between two new 3D portions of the **data** space ; 3) projection-cueing, a group of three tools that use change in **object** brightness as a cue to show change in aspects of the projection of **objects** from the **data** space to the visual space during hD-rotation. In addition to these tools for touring high-dimensional multivariate space, we discuss tools for manipulating the 3D visual **space** , and a tool for examining the relationship between two **data** spaces. Finally, we present a guided-tour implementation in which the user manipulates joysticks and sliders to dynamically and smoothly **control** the graphics tools in real time. A video supplement demonstrates the implementation. (Author abstract) 11 Refs.

Descriptors: *COMPUTER GRAPHICS--*Imaging Techniques; STATISTICAL METHODS ; IMAGE PROCESSING; MATHEMATICAL TECHNIQUES; VIDEO RECORDING

Identifiers: STATISTICAL GRAPHICS; MULTIVARIATE **DATA** ; HIGH-DIMENSIONAL **DATA**

Classification Codes:

723 (Computer Software); 741 (Optics & Optical Devices); 921 (Applied Mathematics); 922 (Statistical Methods); 716 (Radar, Radio & TV Electronic Equipment)

72 (COMPUTERS & DATA PROCESSING); 74 (OPTICAL TECHNOLOGY); 92 (ENGINEERING MATHEMATICS); 71 (ELECTRONICS & COMMUNICATIONS)

18/5/22 (Item 3 from file: 2)
DIALOG(R) File 2:INSPEC
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5848688 INSPEC Abstract Number: C9804-3350-004

Title: Representation of multidimensional mapping by monodimensional neural networks

Author(s): Carotenuto, R.; Franchina, L.; Coli, M.

Author Affiliation: Dipt. di Ingegneria Elettronica, Univ. di Roma, Italy

Conference Title: Proceedings of the Fourteenth International Conference Applied Informatics p.409-12

Editor(s): Hamza, M.H.

Publisher: IASTED-ACTA Press, Anaheim, CA, USA

Publication Date: 1996 Country of Publication: USA 459 pp.

ISBN: 0 88986 195 1 Material Identity Number: XX96-00489

Conference Title: Proceedings of IASTED International Conference on Applied Informatics

Conference Sponsor: IASTED

Conference Date: 20-22 Feb. 1996 Conference Location: Innsbruck, Austria

Language: English Document Type: Conference Paper (PA)

Treatment: Theoretical (T)

Abstract: The problem of representing **multidimensional mappings** arises in many engineering fields. A novel iterative technique dealing with a class of n-dimensional mapping is proposed by the authors. Under some assumptions, the iterative technique "projects" the n-dimensional mapping over the coordinate planes and constructs n monodimensional **data vectors** representing the n monodimensional functions yielded by the projection. The proposed technique, belonging to memory-based techniques, greatly reduces the amount of memory required to store the representation of the mapping. The iterative technique is very well suited to work in conjunction with an associative memory structure as the monodimensional CMAC and in the presence of on-fly **data**. An application to dynamical system output prediction is presented. Moreover, a convergence discussion for the proposed algorithm is provided. Finally, computer simulations verify the stated theory. (11 Refs)

Subfile: C

Descriptors: cerebellar model arithmetic computers; content- **addressable** storage; convergence of numerical methods; digital simulation; intelligent **control**; iterative methods; process **control**

Identifiers: monodimensional neural networks; **multidimensional mapping** representation; engineering; iterative technique; n-dimensional mapping; coordinate planes; monodimensional **data vectors**; monodimensional functions; memory-based techniques; associative memory structure; dynamical system output prediction; convergence; computer simulations; algorithm

Class Codes: C3350 (Control in industrial production systems); C1230D (Neural nets); C1340N (Neurocontrol); C4130 (Interpolation and function approximation)

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18/5/40 (Item 1 from file: 99)
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs
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1432738 H.W. WILSON RECORD NUMBER: BAST97001313

Optimal data scheduling for uniform multidimensional applications

Wang, Qingyan; Passos, Nelson Luiz; Sha, Edwin Hsing-Mean

IEEE Transactions on Computers v. 45 (Dec. '96) p. 1439-44

DOCUMENT TYPE: Feature Article ISSN: 0018-9340 LANGUAGE: English

RECORD STATUS: Corrected or revised record

ABSTRACT: The authors propose a static **data** scheduling method, called carrot-hole **data** scheduling, for **controlling** the **data** traffic between different levels of **memory** in **multidimensional** applications. The method comprises a **data** scheduling phase and the selection of optimal partition and scheduling **vectors**. The carrot-hole **property** ensures that memory misses occur only to nodes along the partition boundaries. Experimental results show that, in comparison to results obtained from traditional methods, on-chip memory misses are significantly reduced using the proposed method.

DESCRIPTORS: Memory management (Computer science); Multidimensional signal processing;